Business Analysis Viewpoints

There are an infinite number of ways of looking at any system. This article examines useful viewpoints that help Business Analysts to understand the real problem and come up with innovative ideas.

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What is My Starting Point?

Suppose you are working on a project for your local council to improve the way that they clear the leaves from the street in autumn. They say they want to use more modern leaf blowing machines instead of the brooms that they currently use. Where do you start? It all depends on what you already know about this and similar systems.

Your client, the local council, is taking a viewpoint that focuses on a solution. But they haven't told you what the problem is. They are asking you for "more modern leaf blowing machines" but why do they want this? What do they expect this solution will do for them? If you can discover the answer to this question you are well on the way to discovering the real problem.

Yes, maybe the solution they are asking for is the best one – but after many years of similar experiences, I am willing to bet it is not. And once you discover the real problem then other, usually better, solutions will reveal themselves.

An effective way to discover the real problem is to start with the solution that the client has asked you for and use it as the basis for discovering the real problem. Start by doing a rough sketch (something like Figure 1) to represent the solution the client has asked for. Draw it with the client and talk your way through it using the client's terminology. If you don't feel confident of your drawing skills just annotate the picture with the client's words.

"Each leaf sweeper has a daily schedule of where they should work that day. I want them to use new, up to date, blowing machines to blow the leaves into piles. Then they will probably need to sweep the leaves into tidy piles. When they have enough piles of leaves, they will phone head office and tell them that the leaves are ready to be picked up by the trucks. Then the truck will arrive, put the leaves into bags, loads them into the truck and take the bags to the Fertiliser manufacturer."
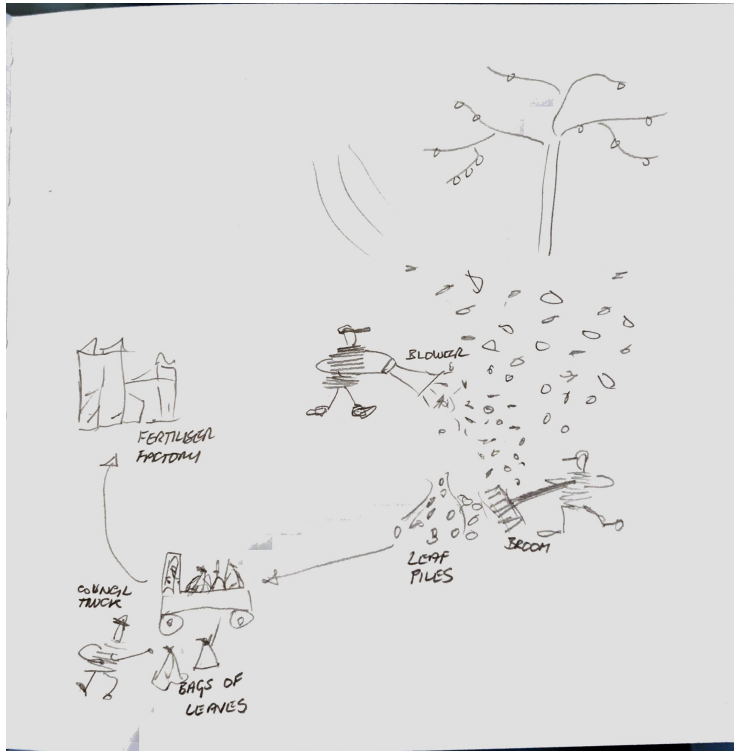
Figure 1: This sketch captures the solution that the client has asked for and provides a way of establishing good communication and starting to understand the real problem.

Once you have established the lines of communication then you can ask some questions to probe more deeply.

Analyst: "Why do you want them to use a new type of blowing machines?"

Client: "Other councils use them and we want to be up to date. And we want to speed up the time it takes to make piles of leaves ready for the drivers to pick them up"

Analyst: "Why do we want to be faster?"

Client: "We don't want leaf pick up to be delayed. The weather is unpredictable and if it rains and is windy, the leaves make the pavements very slippery and cause pedestrians to fall – we've had a lot of accidents."

Analyst: "So we need to do whatever we can to speed up the removal of leaves from the footpaths and avoid accidents."

Client: "That's what we need to do."

By talking to the Client in terms of what he has asked for you start to have a better understanding of what he really needs.

How is it done Now?

To understand more about the client's needs it's often a good idea to have a look at how the work is being done now.

You want to discover who are the people within the scope of your project. Who are the council workers who currently clear the leaves, who are their managers, what other parts of the organisation are involved, what is the geographical area, what technology do they currently use for leaf clearing, what software and hardware systems do they have. All these, and many more, are questions about how things work (or don't work) now. You are probably already thinking – this could go on forever, there are so many different details about how a current business system works. There are an endless number of questions you could ask; you need some way of knowing when you have gone far enough. Try testing your understanding by seeing if you can answer three questions.

Can I identify the scope of the system that I need to investigate?

Can I identify the stakeholders who are part of this system?

Do I understand why the council wants to do this project? Our understanding is that we need to do whatever we can to speed up the removal of leaves from the footpaths and avoid accidents.

The reason that you would take a "How they do it Now" viewpoint is to understand the organisation that you are being asked to change so that you make the most valuable changes. If you have a lot of knowledge of the organisation, then you will be able to get to the How Now view more quickly.

What Now Viewpoint

Test your understanding of the real business problem/opportunity by focusing on the What Now viewpoint. This viewpoint is not concerned with how the work is done, instead you are looking at what would have to be done now matter how you do it – an abstract point of view. This is often referred to as the essential viewpoint. It concentrates on the rules and procedures that would have to be carried out and the data that would have to be remembered *no matter how the work is done.*

A good way of understanding of this viewpoint is by drawing a context diagram – See Figure 2 - to try and identify the scope and expose the real business problem.
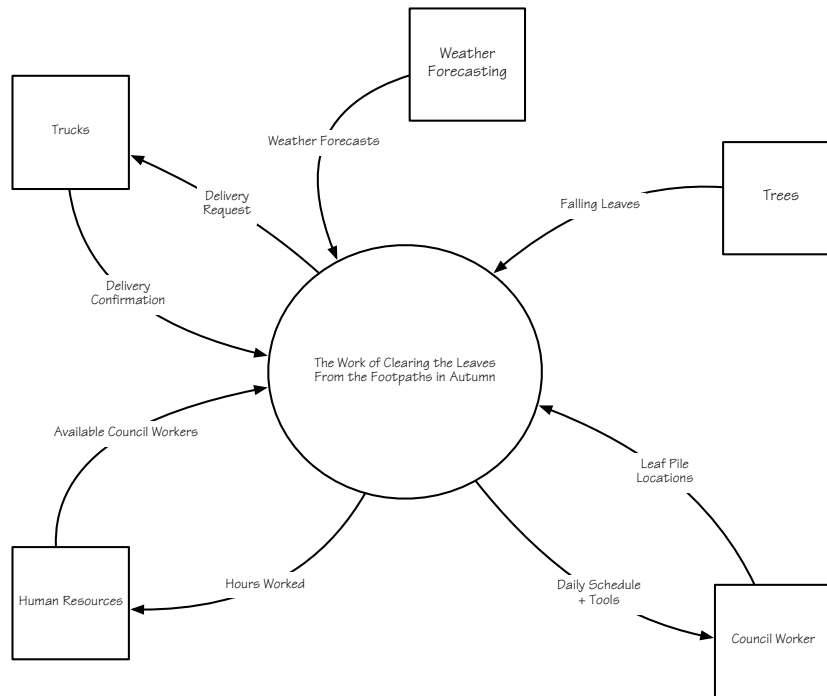

Figure 2: This context diagram represents the scope of the Business Problem independently from how we intend to solve it.

The context diagram in Figure 2 exposes the scope of the investigation necessary to understand the real business problem.

Each one of the flows of data and material on the context diagram is connected to some significant happening (or business event) that the Work (represented by the circle) has to respond to. The following identifies 5 business events and links them to the relevant flows of data and material:

1. Human Resources have new/changed availability of council workers.

   Response: We have to keep track of *Available Council Workers.* So that we can make a Daily Schedule for the staff who are available.

2. Trees are shedding their leaves.

   Response: When there is a bad *Weather Forecast* and/or there are *Falling Leaves* on the footpaths we need to make a *Daily Schedule* for the council workers and provide them with *Tools.*

3. Council Workers have blown the leaves and swept them into piles.

   Response: When the Council Workers have swept the leaves into piles they tell head office the *Leaf Pile Locations* and head office makes a *Delivery Request* for a truck to put the piles of leaves in bags and deliver the bags of leaves to the Fertiliser Manufacturer.

4. Response: The truck confirms a delivery.

   Head office ensures that all Delivery Requests have a Delivery Confirmation.

5. Weekly analysis of work done by council workers.

   Response: Every week, the council tells Human Resources department the *Hours Worked* by each of the *Council Workers.*

Now that you have an understanding of what the work does to respond to the business events you can see whether there are improvements that you could suggest to the business.

Future What Viewpoint

Your client has told you the business rules that are currently in operation. However, you might be able to suggest new and improved rules that would be closer to what the client needs in order to solve the problem.

It's worth stopping here to ask – why doesn't the client come up with the new, innovative business rules, surely this is the responsibility of the business. That's true, but the problem is that the client is usually too close to the "How it works Now" point of view to identify and ask for improved business essence. However, once the analyst comes up with suggestions then it is the business' responsibility to choose between alternatives.

You, the analyst, want to identify improved business essence that increases the business' ability to solve the real problem. A good way to do this is for you to look at each business event and think about how you can improve "What it does in the Future".

For example, let's have a look at Event 3:

3. Council Workers have swept the leaves into piles.

   Response: When the Council Workers have blown the leaves and swept them into piles they tell head office the *Leaf Pile Locations* and head office makes a *Delivery Request*

for a truck to put the piles of leaves in bags and deliver the bags of leaves to the Fertiliser Manufacturer.

We know that the overall goal is that we need to do whatever we can to speed up the removal of leaves from the footpaths and avoid accidents. What changes could we suggest to event 3 that would make it more likely to meet the goal.

Instead of blowing the leaves, then sweeping them, then putting them into bags could we suck the leaves directly into bags? Suppose that the council worker could fit a bag onto the sucking machine (rather like a vacuum cleaner) and then have the leaves go directly into the bag. When the bag is full the council worker seals it, adds it to the pile of full bags and then fits another bag onto the machine.

Yes, this is a radical change and there might not be a suitable machine, but the point is to question what they are doing now and see what they could do (suck instead of blow) to bring them closer to solving the real problem.

When the pile of bags is big enough to fill a truck the team leader texts head office and a truck is despatched to pick up the bags.

Or how about Event 1:

1. Trees are shedding their leaves.

    Response: When there is a bad *Weather Forecast* and/or there are *Falling Leaves* on the footpaths we need to make a *Daily Schedule* for the council workers and provide them with *Tools*.

Instead of waiting for a bad Weather Forecast or a report of Falling Leaves could we predict when the leaves are going to start falling? Then we could either suck the leaves off the trees or be there when they start falling and catch them before they build up on the footpaths.

The point of taking a Future What point of view is to imagine new or changed business rules that would help to solve the real problem.

Future How Viewpoint

When you take the Future How viewpoint you are coming up with alternative solutions to the problem. You compare multiple solution ideas by bringing each one to life and using safe to fail probing to test each solution. By doing this you identify the one that is the best solution to meeting the goal and satisfying the essence of the problem.

A future article will be devoted to the Future How Viewpoint.

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http://www.volere.co.uk

Also in books written by James Robertson & Suzanne Robertson, the latest is:

Business Analysis Agility: Delivering Value Not Just Software
https://amzn.to/2CnVhTN Video https://youtu.be/l_9u5UI12uo

in Volere seminars and consulting

on the Volere Requirements Linked In group http://www.linkedin.com/e/vgh/2491512/

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